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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/722,747

11/25/2003

Charles E. Narad

P17968

7304

59796

7590

10/15/2008

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EXAMINER

CHRISTENSEN, SCOTT B

ART UNIT

PAPER NUMBER

2444

MAIL DATE

DELIVERY MODE

10/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/722,747	Applicant(s) NARAD, CHARLES E.	
	Examiner Scott Christensen	Art Unit 2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/6/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in regards to the most recent papers filed on 7/25/2008.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/25/2008 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10, 12-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher in US Patent 6,434,620, hereafter referred to as "Boucher" in view of "Introduction to the Remote Monitoring (RMON) family of MIB Modules" by Waldbusser, Cole, Kalbfleisch, and Romascanu, hereafter referred to as "Waldbusser."
5. With regard to claim 1, Boucher discloses a network interface comprising:
a direct memory access unit (Boucher: Column 8, lines 32-38); and
circuitry to:

receive and transmit network data (Boucher: Abstract);

maintain a set of statistics metering operation of the network interface (Boucher: Column 44, lines 20-23), the set of statistics includes at least one selected from the group of (1) a number of bytes received, and (2) a number of packets received (Boucher: Column 56, lines 51-63); and

initiate a direct memory access transfer of the set of statistics to the host processor (Boucher: Column 63, lines 17-43 and Column 56, lines 27-33).

Boucher does not disclose expressly that the circuitry initiates a direct memory access transfer of the set of statistics in accordance with the received data specifying a periodic time value to perform a periodic direct memory access transfers of the maintained set of statistics, or that the direct memory access transfer is performed periodically at a periodicity of the periodic time value.

However, Waldbusser discloses the Remote Monitoring family of MIB modules. The functions described in Waldbusser includes the `tpmAggregateReportsGroup`, which is used to provide the collection of aggregated statistical measurements for the configured report intervals (Waldbusser: Page 16, Section 4.11, "The `tpmAggregateReportsGroup`"). Further, the statistics are over an interval specified by the management station (Waldbusser: Page 7, paragraph 2).

It would have been obvious to combine Waldbusser with the disclosure of Boucher.

The suggestion/motivation for doing so would have been that statistical information on the network interface of Boucher could be collected automatically at

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certain intervals configured by the management station. This allows a program or user monitoring the interface to receive recent statistics without requiring that the user refresh the statistics report manually.

Further, Official Notice is taken that it would have been well known to provide a periodic time value to perform a periodic direct memory access transfers of the maintained set of statistics, or that the direct memory access transfer is performed periodically at a periodicity of the periodic time value.

Thus, it would have been obvious to modify the teachings of Boucher as modified by Waldbusser to perform a periodic direct memory access transfers of the maintained set of statistics, or that the direct memory access transfer is performed periodically at a periodicity of the periodic time value.

The suggestion/motivation for doing so would have been that performing the transfer of the statistics was known. It was also known to transfer the statistics based on requests from the host processor (see Boucher: Column 63, lines 17-43 and Column 56, lines 27-33), as admitted by Applicant (Applicant's Specification: Paragraph [0008]). However, this can cause a burden on the system, as the processor would have to manually initiate each transfer of the statistics. By allowing the processor to determine how often to transfer the statistics, the processor would not have to utilize resources to initiate each transfer, instead simply being able to access the most up-to-date statistics when needed.

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6. With regard to claim 2, Boucher discloses that the set of statistics comprises each of the following: a number of packets received by the interface, a number of bytes received by the interface, a number of packets transmitted by the interface, and a number of bytes transmitted by the interface (Boucher: Column 56, lines 51-63).

7. With regard to claim 3, Boucher discloses the invention as substantially claimed except that the circuitry comprises circuitry to include a timestamp with the direct memory access transfer of the set of statistics, the timestamp being a time when the values of the set of statistics transferred by direct memory access were set by the network interface.

However, Official Notice is taken that it was well known to have timestamps indicating when data was written. For example, it was well known with operating systems to include a timestamp indicating when a file was last modified and when the file was created.

Accordingly, it would have been obvious to modify the teachings of Boucher as modified by Waldbusser to include a timestamp with the direct memory access transfer of the set of statistics, the timestamp being a time when the values of the set of statistics transferred by direct memory access were set by the network interface.

The suggestion/motivation for doing so would have been that including information on when the set of statistics were set allows the system to be aware of the time that the set of statistics were current, which is valuable for purposes of analysis of the conditions of the connection. For example, a large number of packets received may

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be evidence of a DoS attack, where having knowledge of the timing would allow the attack to be correlated with other possible attacks, or at the very least analyzed with respect to other known network conditions in order to determine the source of the attack.

8. With regard to claim 4, Boucher discloses that the circuitry to include a sequence count with the direct memory access transfers of the at least one statistic (Boucher: Column 57, lines 6-12).

Boucher does not disclose expressly that the sequence count sequentially numbering successively DMA-ed sets of the statistics.

However, it would have been obvious to have the sequence count sequentially numbering successively DMA-ed sets of the statistics.

The suggestion/motivation for doing so would have been that counters typically sequentially number the events that the counter is associated with. Therefore, a person of ordinary skill in the art would most likely have used sequential numbers to count the transfer of the DMA transmissions of the statistics.

9. With regard to claim 5, Boucher discloses the invention as substantially claimed except that the set of statistics comprises multiple RMON (Remote Monitoring) statistics.

However, Waldbusser discloses RMON, and the collection of statistics within RMON (Waldbusser: Page 3, section 3).

It would have been obvious to combine the teachings of Waldbusser with the combination of Waldbusser and Boucher.

The suggestion/motivation for doing so would have been RMON, as in Waldbusser, allows for monitoring devices to be utilized to remotely monitor a network. Any statistic that is collected within the RMON framework would result in the statistic being an RMON statistic as claimed.

10. With regard to claim 6, Boucher discloses that the circuitry comprises circuitry to initiate direct memory access transfer of received network data (Boucher: Column 8, lines 30-37).

11. With regard to claim 7, Boucher discloses that the network interface comprises a framer (Boucher: Column 56, lines 18-26).

12. With regard claim 8, Boucher discloses that the network interface comprises a Media Access Controller (MAC) (Boucher: Figure 21, MAC-A to MAC-D).

13. With regard to claim 9, Boucher discloses that the network interface comprises a PHY (Boucher: Column 77, lines 6-15).

14. With regard to claim 10, Boucher discloses circuitry to configure the circuitry to initiate the direct memory access transfers (Boucher: Column 60, lines 53-59).

15. With regard to claim 12, Boucher discloses that the circuitry to configure comprises at least one register (Boucher: Column 56, lines 27-33).

16. With regard to claim 13, Boucher discloses that the circuitry to configure comprises circuitry to determine configuration information from received packets (Boucher: Column 21, line 64 to Column 22, line 10).

17. With regard to claim 14, Boucher discloses that the circuitry to determine configuration information from received packets comprises circuitry to intercept packets received from the host traveling along a transmit path (Boucher: Column 36, lines 14-20).

18. With regard to claim 15, Boucher discloses that the direct memory access unit comprises circuitry to notify a processor of completion of the transfer (Boucher: Column 90, line 64 to column 91, line 12).

19. With regard to 16, the invention claimed is substantially similar to that claimed in claim 1, and is rejected for substantially similar reasons.

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20. With regard to claims 17-21, the instant claims include limitations that are substantially similar to limitations claimed in claims 6, 5, 4, 7, and 10, respectively, and are rejected for substantially similar reasons.

21. With regard to claim 22, Boucher discloses that the configuring comprises identifying at least one memory location to receive transferred set of statistics (Boucher: Column 84, lines 52-61. It is noted that Direct Memory Access involves performing read/write operations directly from/to memory locations. Therefore, to perform a write operation in DMA, a memory location must be identified to receive the data.).

22. With regard to claim 23, Boucher discloses,
receiving a packet at the network interface from the host (Boucher: Column 1, lines 40-42); and
that the configuring comprises configuring based on data included in the packet (Boucher: Column 21, line 64 to Column 22, line 10).

23. With regard to claim 24, Boucher discloses that the transferring into the memory comprises transferring into a cache memory of at least one of the at least one processors (Boucher: Column 61, lines 14-30).

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24. With regard to claim 25, the instant claim includes limitations that are substantially similar to limitations found in claim 15, and is rejected for substantially similar reasons.

25. With regard to claim 26, the instant claim is substantially similar to claim 1, and is rejected for substantially similar reasons.

26. With regard to claims 27-33, the instant claims include limitations that are substantially similar to limitations found in claims 6, 5, 4, 10, 22, 23, and 15, respectively, and are rejected for substantially similar reasons.

27. With regard to claim 34, the instant claim is substantially similar to claim 5 (and claim 1, from which claim 5 depends), and is rejected for substantially similar reasons.

28. With regard to claims 35-38, the instant claims include limitations that are substantially similar to limitations found in claims 10, 13, 27, and 4, respectively, and are rejected for substantially similar reasons.

Response to Arguments

29. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Christensen whose telephone number is (571)270-1144. The examiner can normally be reached on Monday through Thursday 6:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paul H Kang/
Primary Examiner, Art Unit 2144

/S. C./
Examiner, Art Unit 2144